

**REMARKS**

Upon entry of this Response, claims 1-10, 12-34, 48-51, 53-58, and 69-71 remain pending in the present patent application. Claims 8, 18, 28, and 48 have been amended herein, claims 69-71 have been added, and claims 59-68 have been canceled in response to a restriction requirement in the present Office Action. Accordingly, Applicants expressly reserve the right to pursue the subject matter of claims 59-68 in a divisional application. In addition, Applicants respectfully request reconsideration of the pending claims in view of the following remarks.

**I. REPLY TO "RESPONSE TO AMENDMENT" SECTION OF OFFICE ACTION**

Item 2 of the Office Action that is set forth underneath a heading of "Response to Amendment" states as follows:

"Optimization Within Prior Art Conditions or Through Routine Experimentation generally will not support the patentability of subject matter encompassed by the prior art". "The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages."

Applicant's subject matter as claimed have not a patentable difference relative prior arts. Applicant's results of design optimization with using of routine design tools as simulation and similarity modeling could be a subject of a scientific technical publication but not the subject of patents.

The claim would have been obvious because a person of ordinary skill has good reason to pursue the known options within his her technical grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense.

Office Action, pages 2-3.

Applicants respectfully disagree. Applicants assert that the Declaration of Charles Pennington was highly relevant to the rejections of the claims of the prior Office

Action. To this end, it appears that in the present Office Action, one of the references, namely the "wooden house," was withdrawn as it no longer appears in the present Office Action. To the extent that the Declaration of Charles Pennington addresses the underlying reasons set forth in the prior Office Action for the rejection of the claims, the Declaration refers directly to the claims of the application.

In addition, Applicants note that the Office Action specifically states that "Thus, there is no showing that the objective evidence of nonobviousness is commensurate in scope with the claims. See MPEP §716." Applicants respectfully object to the summary dismissal of the subject matter of the Declaration provided. In particular, such summary dismissal is not in accordance with policy as set forth in the Manual of Patent Examining Procedure (MPEP). Specifically, in §716.01 "Generally Applicable Criteria," section (B) entitled "Consideration of Evidence" states as follows:

(B) *Consideration of Evidence.* Evidence traversing rejections, when timely presented, must be considered by the examiner whenever present. All entered affidavits, declarations, and other evidence traversing rejections are acknowledged and commented upon by the examiner in the next succeeding action. The extent of the commentary depends on the action taken by the examiner. Where an examiner holds that the evidence is sufficient to overcome the *prima facie* case, the comments should be consistent with the guidelines for statements of reasons for allowance. See MPEP § 1302.14. Where the evidence is insufficient to overcome the rejection, the examiner must specifically explain why the evidence is insufficient. General statements such as "the declaration lacks technical validity" or "the evidence is not commensurate with the scope of the claims" without an explanation supporting such findings are insufficient. (Emphasis Added)

Applicants respectfully request an explanation as to how the objective evidence is not commensurate with the scope of the claims given that the subject matter of the affidavit submitted is directly relevant to the rejections of the claims, *etc.* Nonetheless,

Applicants submit herewith a Second Declaration of Charles Pennington that includes additional items directly relating the subject matter of the claims.

In addition, Applicants note that the Office Action cites MPEP § 2131.03, section 2, apparently to support the rejections set forth in the Office Action stating as follows:

"Optimization Within Prior Art Conditions or Through Routine Experimentation generally will not support the patentability of subject matter encompassed by the prior art". "The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages."

Office Action, page 2.

Applicants respectfully assert that this citation to the MPEP §2131.03, section 2, above is entirely improper. First, the above language does not actually appear in §2131.03, section 2. Rather, it is apparent that the operative language appears in the MPEP at §2144.05(2)(A), which is directed at the concept of obviousness due to the "optimization of ranges." To this end, the operative language is discussing how claims directed at ranges cannot be considered patentable when claiming optimum ranges discoverable by routine experimentation. The language cited in the Office Action appears to have been taken entirely out of context from the discussion in the MPEP where it appears. In particular, MPEP § 2144.05(II)(A) is reproduced below including appropriate headings with the underlined language that appears in the Office Action.

## II. OPTIMIZATION OF RANGES

### A. Optimization Within Prior Art Conditions or Through Routine Experimentation

Generally, differences in concentration or temperature will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such concentration or temperature is critical. "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by

routine experimentation." *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955) (Claimed process which was performed at a temperature between 40°C and 80°C and an acid concentration between 25% and 70% was held to be *prima facie* obvious over a reference process which differed from the claims only in that the reference process was performed at a temperature of 100°C and an acid concentration of 10%.); see also *Peterson*, 315 F.3d at 1330, 65 USPQ2d at 1382 ("The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages."); *In re Hoeschele*, 406 F.2d 1403, 160 USPQ 809 (CCPA 1969) (Claimed elastomeric polyurethanes which fell within the broad scope of the references were held to be unpatentable thereover because, among other reasons, there was no evidence of the criticality of the claimed ranges of molecular weight or molar proportions.). For more recent cases applying this principle, see *Merck & Co. Inc. v. Biocraft Laboratories Inc.*, 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir.), *cert. denied*, 493 U.S. 975 (1989); *In re Kulling*, 897 F.2d 1147, 14 USPQ2d 1056 (Fed. Cir. 1990); and *In re Geisler*, 116 F.3d 1465, 43 USPQ2d 1362 (Fed. Cir. 1997).

Applicants respectfully assert that the language in the Office Action taken out of context from the MPEP is irrelevant to the claims of the present application as the present claims do not involve ranges and the claims are not directed to the chemical arts. Rather, the present claims involve a difference in mechanical design over the prior art that is deserving of patentability.

In addition, one of the two sentences cited in the Office Action above is cited as a portion of *In re Petersen*, 315 F.3d 1325, 65 USPQ 2nd 1379 (Fed. Cir. 2003). Thus, it is apparent that the Office Action is citing the language from case law in support of the rejections of the present claims. As set forth in MPEP § 2144.04 and MPEP § 2144(III), "if the facts in a prior legal decision are sufficiently similar to those in an application under examination, the Examiner may use the rationale used by the court." MPEP § 2144.04. A close examination of *In re Petersen* reveals that there is absolutely no factual similarity between the facts of *Petersen* and the nature of the technology of the

present patent application. In particular, in *Petersen* the applicant had claimed a range of a substance that fit within the range of the substance specified in a prior art document. In this respect, the ranges were overlapping. In such case, the court felt that Peterson's claims were not patentable as the ranges claimed therein fell within the ranges described in the prior art.

However, in the present application, the claims recite a mechanical/structural difference over the cited prior art references. Ranges are simply not relevant in the context of the present application. Accordingly, the citation to *In re Petersen* is entirely improper. Further, the Office Action states:

Applicants' subject matter as claimed have not a patentable difference relative prior arts. Applicants' results of design optimization with using of routine design tools as simulation and similarity modeling could be a subject of a scientific technical publication but not the subject of patents.

Office Action, page 3.

In light of the above discussion, Applicants assert that this statement lacks merit. The rejection of claims in a patent application cannot be based upon the seemingly random citation of language appearing in the MPEP or in case law. Furthermore, Applicants respectfully assert that the subject matter in the Declaration of Charles Pennington clearly provides reasons why the above conclusions in the Office Action are not true. Accordingly, Applicants respectfully assert that the subject matter of such Declaration be given proper consideration as is required by the MPEP in contravention to the statements in the Office Action. In addition, the Second Declaration of Charles Pennington further describes how the subject matter described therein is commensurate with the scope of the claims, thereby addressing any concerns stated in the Office Action to this end.

Also, where the above discussed language in the Office Action is repeated, the arguments set forth in response to such language above is equally applicable.

## **II. REPLY TO "RESPONSE TO ARGUMENTS" SECTION OF OFFICE ACTION**

In addition, it appears in the Response to Arguments section in pages 3-5 of the Office Action that various sections of the MPEP are cited such as, for example, MPEP §2143, stating:

The claim is obvious because known work in one field endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations are predictable to one who is skilled in the art. MPEP § 2143.

Applicants respectfully disagree. As set forth in the Declaration of Charles Pennington submitted with the prior response and as resubmitted herewith as the Second Declaration of Charles Pennington, it was not predictable to one of skill in the art that the rod and recess technology described by the present claims would work as intended. Thus, it was not predictable to one skilled in the art. To this end, reference is made once again to points raised in the Declaration of Charles Pennington that have not been fully addressed in the present Office Action.

In addition, the Office Action states:

Applicant's subject matter as claimed have not a patentable difference relative prior arts. Applicant's results of design optimization with using of routine design tools as simulation and similarity modeling could be a subject of a scientific technical publication but not the subject of patents.

Office Action, page 4.

Applicants respectfully disagree. Specifically, at first glance, the rod and recess technology set forth in the instant claims would not normally appear to be workable

given the stresses that the containers for the storage of spent nuclear fuel must endure in order to be certified by the Nuclear Regulatory Commission. Accordingly, one skilled in the art at first blush would be prompted not to pursue such a design. To the extent that any analysis has been performed to verify the viability of the design, such simply adds extra cost to the creative process. Accordingly, in view of the evidence presented in the Declarations of Charles Pennington filed in this case, Applicants assert that the statement set forth above in the Office Action is without merit.

In addition, the Office Action states as follows:

The claim would have been obvious because a person of ordinary skill has good reason to pursue the known options within his her technical grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense. Using rods for cells (cylinders) connection is disclosed also by Loftis (Abstract; column 3, lines63+).

Office Action, page 4.

Applicants respectfully disagree. This is because such a statement represents an oversimplification of the full circumstances surrounding the present application. Applicants assert that the understanding of the technology as well as the knowledge of those in the field of requirements that must be met by designs also bear on the question. As set forth, for example, in the Second Declaration of Charles Pennington submitted herewith at items 9-11, at first glance the approach set forth in the present claims appears too simple and presents neither obvious strength of connectivity between tubes, nor sufficient heat transfer paths for very hot spent nuclear fuel. Also, the design does not appear to provide for adequate ligaments for accident condition load transmission and distribution through the structure so that both the container and the spent nuclear fuel disposed therein remain geometrically stable through the range of

off-normal and hypothetical accident conditions that a system must withstand as required by applicable federal regulations.

Applicants respectfully assert that the above understanding of the technology at the time of the invention would not lead a person of ordinary skill in the art to create the invention as set forth in the present claims as the Office Action asserts. Rather, the understanding in the art would lead an inventor away from the mechanical structure as set forth in the claims. Accordingly, the above statement in the Office Action on page 4 is entirely without merit.

Further, on page 5, the Office Action states as follows:

Regarding Applicant's argument on page 16 related to "Bosshard teaching away": Bosshard disclose modification of connection between neutron absorber tube different from disclosed by Applicants. However, design with tubes connection "by a pin which is inserted through the lugs welded to the edges of the square tubs" disclosed in admitted art Bosshard specification (column 1, lines 7+) supports obviousness of Applicant's disclose. Accordingly, said Applicants arguments are not persuasive.

Office Action, page 5.

Applicants respectfully assert that the above statement in the Office Action fails to take into account the discussion presented in the Declaration of Charles Pennington filed in response to the prior Office Action. As noted, *Bosshard* teaches structures for the wet storage of nuclear fuel (see Second Declaration of Charles Pennington, item 13). Accordingly, Applicants respectfully assert that *Bosshard* does teach away from the present design due to the fact that one skilled in the art will understand that the structures described therein are not appropriate and would not be applicable to the design of type B containers as described in the Declaration. Wet storage structural loadings under accident conditions are more than an order of magnitude less than those



of these type B packages. Accordingly, Applicants assert that statements that the arguments that *Bosshard* teaches away from the various elements of the present claims are not persuasive are without merit.

### III. REPLY TO THE OBJECTION TO THE DRAWINGS

In item 4 of the Office Action, the drawings have been objected to under 37 C.F.R. § 1.83(a). To this end, the Office Action states as follows:

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the limitation of claim 7, "the plurality of tubes includes a plurality of flat load bearing surfaces at the corners of respective ones of the tubes, the flat load bearing surfaces of the first one of the tubes engaging the plurality of flat bearing surfaces on the second one of the tubes" must be shown or the features canceled from the claims (see claims 7, 17, 27 and 28). Regarding said limitation: as can be seen in FIG. 5, connection of rod 8, 12 with rod 20, 22 by pin cannot connect flat bearing surfaces of corners 60 and 62 together as claimed in claims 7, 17, 27 and 28 and as shown in FIG. 9. No new matter should be entered.

Office Action, page 5.

Applicants respectfully disagree. Specifically, FIGS. 8 and 9 show how flat load bearing surfaces come together at corners of the respective ones of the tubes. To the extent that such a configuration appears to be incompatible with the use of the pins or rods as described in the Office Action as set forth above, Applicants respectfully assert that the drawings illustrate the principle of flat surfaces coming together. It is understood that the drawings of the rods and recesses as set forth in FIG. 5 are not necessarily to scale. To this end, reference is made to paragraph [0012] of the present specification which states:

The disclosed apparatus and methods can be better understood with reference to the following drawings. The components in the drawings are not necessarily to scale.

Accordingly, the drawings of the present application are provided to illustrate the various aspects of the claimed embodiments, but are not working drawings that provide specific dimensions of the components displayed. To this end, drawings in patent applications are not working drawings, but instead generally describe the principles illustrated therein. Accordingly, it is improper to base arguments upon visual measurement of the drawings relative to each other. See *In re Wright*, 193 USPQ 332 (CCPA 1977); *In re Chitayat*, 408 F2d 475, 161 USPQ 224 (CCPA 1969).

Applicants assert that it appears that the Office Action has recited the objection to the drawings with respect to claims 7, 17, 27, and 28 by performing a visual comparison of the drawings as if they relayed precise measurements of the components described. Applicants respectfully assert that such a comparison is improper. Further, Applicants assert that one skilled in the art will understand that the various components will be sized such that flat load bearing surfaces at the corners may come together and that the same corners may also accommodate recesses and rods as described herein. To this end, one skilled in the art understands that the flat load bearing surfaces are longitudinally offset with respect to the recesses and rods. Furthermore, the discussion of FIGS. 8 and 9 describes bringing the flat load bearing surfaces together when the respective tubes are "linked together," which refers to the fact that such tubes are connected by virtue of the rods and pins as described therein. Applicants assert that it is clearly apparent to one skilled in the art that the rod and pin linkages maintain the

load bearing surfaces on abutting tube corners in the appropriate geometric positions for interaction.

Accordingly, Applicants assert that the objection to the drawings is improper. Therefore, Applicants respectfully request that the objection to the drawings be withdrawn.

**IV. REPLY TO OBJECTION UNDER 35 U.S.C. § 112, FIRST PARAGRAPH, ALLEGING A LACK OF ENABLEMENT**

Next, in item 6 of the Office Action, claims 7, 17, 27, and 28 have been objected to under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the enablement requirement. In particular, the Office Action states as follows:

The specification is objected to because the limitation of claims 7, 17, 27 and 28, "the plurality of tubes includes a plurality of flat load bearing surfaces at the corners of respective ones of the tubes, the flat load bearing surfaces on the first one of the tubes engaging the plurality of flat bearing surfaces on the second one of the tubes" must be disclosed with recitation of drawing's position or the features canceled from the claims (see claims 7, 17, 27 and 28). As can be seen in FIG. 5, connection of rod 8, 12 with rod 20, 22 by pin cannot connect flat bearing surfaces of corners 60 and 62 together as claimed in claims 7, 17, 27 and 28 and as shown in FIG. 9. No new matter should be entered.

Office Action, pages 6-7.

Applicants respectfully disagree. Once again, the drawings of the present patent application are not working drawings, but are merely providing illustrations of the various concepts of the present applications. Therefore, the visual comparison made between FIG. 5 and FIGS. 8 and 9 in order to determine whether a pin can fit in recesses of the corners as shown is entirely improper. This reflects the fact that patent drawings generally provide illustration of the various concepts and are not working

drawings with precise measurements. *In re Wright*, 193 USPQ 332 (CCPA 1977); *In re Chitayat*, 408 F2d 475, 161 USPQ 224 (CCPA 1969). Applicants assert that one skilled in the art understands that the various components are sized such that flat load bearing surfaces at the corners may come together and that the same corners may also accommodate recesses and rods as described herein. To this end, one skilled in the art understands that the flat load bearing surfaces are longitudinally offset with respect to the recesses and rods. Stated another way, it is clearly apparent to one skilled in the art that the pin and rod linkages maintain the load bearing surfaces on abutting tube corners in the appropriate geometric positions for interaction. Accordingly, Applicants respectfully assert that the rejection of claims 7, 17, 27, and 28 under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the enablement requirement is improper. Therefore, Applicants respectfully request that the rejection of these claims be withdrawn.

**V. REPLY TO REJECTION UNDER 35 U.S.C. § 112, SECOND PARAGRAPH, ALLEGING INDEFINITENESS**

In items 8-11, claims 7, 17, 27, 28-34, and 48-58 have been rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. In particular, the Office Action states that the elements of “a plurality of flat load bearing surfaces,” “at least one said wall of the container,” “a plurality of couplings,” and “a horizontal bearing load applied to the array of tubes” are indefinite as their “metes and bounds” are “not defined, rendering the claims indefinite.”

Applicants respectfully assert that the scope of the claims is clear to one possessing ordinary skill in the pertinent art. In particular, the elements outlined above in the Office Action are clear to the extent that they interrelate with the other elements of the claims in which they appear. To this end, Applicants respectfully assert that one skilled in the art can understand the “metes and bounds” of the claims.

In addition, while the Office Action alleges that such elements specified result in the metes and bounds of the claimed invention not being defined, Applicants respectfully assert that the Office Action fails to explain precisely how this is the case. Accordingly, Applicants respectfully request that either a proper explanation be provided as to how the above identified elements render the respective claims indefinite, or that the rejection of claims 7, 17, 27, 28-34, and 48-58 be withdrawn.

**VI. IMPROPER USE OF NONANALOGOUS REFERENCES TO REJECT CLAIMS UNDER 35 U.S.C. §103(a)**

Next, with reference to items 14 and 15, claims 1, 6, and 7 have been rejected under 35 U.S.C. § 103(a) as allegedly being obvious over US Patent 6,009,136 issued to Loftis et al. (hereafter “*Loftis*”) in view of the online publication by Hoover Fence Co. (Hoover Fence Company Catalog, Newton Falls, Ohio, June 1999, hereafter “*Hoover Fence*”). Further, claims 8-10, 13-34, 48-51, and 53-58 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over *Loftis* in view of U.S. Patent 4,630, 738 issued to Bosshard (hereafter “*Bosshard*”) in view of U.S. Patent Application Publication 2002/0015614 filed by Lindsay (hereafter “*Lindsay*”) in view of *Hoover Fence*.

Applicants respectfully assert that each of these rejections is improper as both rejections employ nonanalogous art. In particular, *Lindsay* and *Hoover Fence* present

nonanalogous art that is improperly implied in the rejection of the claims of the present application.

In order to rely on a reference as a basis for a rejection of a patent application, the reference must either be in the field of the applicant's endeavor or, if not, then the reference must be reasonably pertinent to the particular problem with which the inventor was concerned. *In re Oetiker*, 977 F2d 1443, 24 USPQ 2d 1443 (Fed. Cir. 1992); *In re Deminski*, 796 F2d 436, 230 USPQ 313 (Fed. Cir. 1986). *Lindsay* describes a quick release mechanism for a detachable hitch used on transport carrier frames. Such trailer hitch assemblies are employed for industrial transport such as the transport of manufactured housing as described by *Lindsay*. *Hoover Fence* describes a hinge that is used to create a gate in a fence.

Applicants respectfully assert that neither the trailer hinge of *Lindsay* or the gate hinge of *Hoover Fence* are within the field of the endeavor of the present application which relates to the storage of **radioactive** spent nuclear fuel. Trailer hitches and hinges used for gates simply do not relate to the art of manufacturing containment structures for the storage and transport of spent nuclear fuel. Specifically, the art of the design of systems and structures for the storage and transport of spent nuclear fuel involves extreme factors in terms of mechanical stresses, heat transfer, neutron attenuation and absorption for criticality control, radiation attenuation and absorption for exposure control, and confinement/containment of radioactive materials all expressed within design requirements, certification requirements, and safety analysis documents for **radioactive** spent nuclear fuel. Applicant asserts that even the average man on the street would agree that the field of containment for the storage and transport of

radioactive spent nuclear fuel probably involves much different expertise, skills, and knowledge than the fields involving the design and manufacture of trailer hitches and hinges for gates. Accordingly, Applicants respectfully assert that *Lindsay* and *Hoover Fence* do not fall within the field of the endeavor of the present application.

In addition, Applicants assert that neither *Lindsay* nor *Hoover Fence* are reasonably pertinent to the problems with which the inventors of the present claimed embodiments were concerned. In particular, the problems with which the inventors of the present claimed embodiments were concerned involve the storage and transport of spent nuclear fuel which is highly radioactive and can be extremely harmful if not appropriately contained using safe system designs. In fact, the radioactivity of spent nuclear fuel is so dangerous that it must be specially handled, contained, transported, and stored so as to prevent negative health effects and even death to those who are near it. Applicants respectfully assert that that the principles involved in the design of a simple trailer hitch or a simple hinge for a gate of a fence cannot be deemed to be reasonably pertinent to the problems of designing storage and transport systems and structures for spent nuclear fuel.

To provide an example of what may or may not be considered analogous to a given art, we need only examine the fact scenario of *In re Oetiker* cited above. In *Oetiker*, the invention involved a hose clamp. The patent application for the hose clamp was rejected based upon a combination of an earlier granted patent to the inventor combined with a patent by "Lauro." The *Lauro* patent described a plastic hook and eye fastener for the use in garments, "in which 'unitary tabs of sewing needle puncturable

plastic material ... are affixed to a clothing and the like by sewing." *In re Oetiker* at 1446.

The Federal Circuit found that the *Lauro* reference relating to garments was neither in the field of the applicant's endeavor of creating hose clamps, nor was it reasonably pertinent to the problems faced by the inventor in creating the hose clamp. In finding that *Lauro* was nonanalogous art and that the rejection was improper, the Federal Circuit noted that the only way the combination of the references could be made is with the use of impermissible hindsight. To this end, the Court stated as follows:

In order to rely on a reference as a basis for rejection of the applicant's invention, the reference must either be in the field of the applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned. See *In re Deminski*, 796 F.2d 436, 442, 230 USPQ 313, 315 (Fed.Cir.1986). Patent examination is necessarily conducted by hindsight, with complete knowledge of the applicant's invention, and the courts have recognized the subjective aspects of determining whether an inventor would reasonably be motivated to go to the field in which the examiner found the reference, in order to solve the problem confronting the inventor. We have reminded ourselves and the PTO that it is necessary to consider "the reality of the circumstances", *In re Wood*, 599 F.2d 1032, 1036, 202 USPQ 171, 174 (CCPA 1979)-in other words, common sense-in deciding in which fields a person of ordinary skill would reasonably be expected to look for a solution to the problem facing the inventor.

It has not been shown that a person of ordinary skill, seeking to solve a problem of fastening a hose clamp, would reasonably be expected or motivated to look to fasteners for garments. The combination of elements from non-analogous sources, in a manner that reconstructs the applicant's invention only with the benefit of hindsight, is insufficient to present a *prima facie* case of obviousness. There must be some reason, suggestion, or motivation found in the prior art whereby a person of ordinary skill in the field of the invention would make the combination. That knowledge can not come from the applicant's invention itself. *Diversitech Corp. v. Century Steps, Inc.*, 850 F.2d 675, 678-79, 7 USPQ2d 1315, 1318 (Fed.Cir.1988); *In re Geiger*, 815 F.2d 686, 687, 2 USPQ2d 1276, 1278 (Fed.Cir.1987); *Interconnect Planning Corp. v. Feil*, 774 F.2d 1132, 1147, 227 USPQ 543,



551 (Fed.Cir.1985).

Given the nature of the design of containers for the storage and transport of spent nuclear fuel, Applicants respectfully assert that the combination of references employed herein to reject the present claims that include either *Lindsay* or *Hoover Fence* can only be the product of the use of impermissible hindsight. This is especially the case given the history of the prosecution for this application in which various structures such as log cabins (plastic or otherwise) have been asserted. To this end, as set forth by the Federal Circuit, Applicants assert that the "reality of the circumstances" must be properly considered in this case. In view of the foregoing, Applicants assert that references teaching structures such as trailer hitches or gate hinges are nonanalogous when considering structures for the safe storage and transport of **radioactive spent nuclear fuel.**

Accordingly, Applicants respectfully request that the rejection of claims 1, 6-10, 13-34, 48-51, and 53-58 be withdrawn by virtue of the fact that the rejection of each of these claims involves the use of nonanalogous art.

**VII. REJECTION OF CLAIMS 1, 6, AND 7 AS ALLEGEDLY BEING UNPATENTABLE UNDER 35 U.S.C. § 103(a) OVER LOFTIS IN VIEW OF HOOVER FENCE**

With specific reference to item 14, as stated above, claims 1, 6, and 7 have been rejected under 35 U.S.C. § 103(a) as being obvious over *Loftis* in view of *Hoover Fence*. A prima facie case of obviousness is established only when the prior art teaches or suggests all of the elements of the claims. MPEP §2143.03, *In re Rijckaert*, 9 F.3d 1531, 28 U.S.P.Q2d 1955, 1956 (Fed. Cir. 1993). In addition to the above arguments

that the rejection of these claims is improper due to the use of nonanalogous art, Applicants respectfully assert that the cited combination of references fails to show or suggest each element of claims 1, 6, and 7. Accordingly, Applicants respectfully request that the rejection of these claims be withdrawn.

To begin, claim 1 recites as follows:

1. A container for storing or transporting spent nuclear fuel, the container comprising:

a plurality of tubes that receive spent nuclear fuel assemblies, each tube having four sidewalls and four corners defining a rectangular cross section;

an attachment means for attaching respective pairs of a plurality of corners of the tubes to each other, at least one corner of a first one of the tubes engaging another corner of a second one of the tubes, the attachment means comprising a plurality of recesses in respective ones of the corners and a plurality of rods that are positioned in the recesses between respective engaged ones of the corners, wherein each of the rods is a cylinder having a single cylindrical wall, the cylindrical wall of each of the rods contacting at least two recesses associated with at least two of the tubes;

each engaged corner of the first and second ones of the tubes being formed from an intersection of a first sidewall and a second sidewall, the first and second side walls being normal to each other;

the first sidewall of the first one of the tubes and the first sidewall of the second one of the tubes being in substantial alignment; and

the second sidewall of the first one of the tubes and the second sidewall of the second one of the tubes being in substantial alignment.

With respect to claim 1, the Office Action states as follows:

Regarding claim 1, Loftis discloses a container for storing or transporting spent nuclear fuel (title, abstract; column 1, lines 17+, column 2, lines 38+), the container comprising: a plurality of tubes that receive spent nuclear fuel assemblies, each tube having four sidewalls and four corners defining a rectangular cross section (cells C1-C15 in FIG. 1, 3, column 2, lines 37+, column 3, lines 48+); an attachment means (section [0005], lines 6+) for attaching respective pairs of a plurality of corners of the tubes to each other, at least one corner of a first one of the tubes engaging another corner of a second one of the tubes (rod segments 5 in FIG. 1, 2, column 3, lines 47+, column 4, lines 1+), the attachment means comprising a plurality of recesses (inherently created around the rod

segment 5 by welding as shown in FIG. 1, 2) in respective ones of the corners and plurality of rods that are engaged ones of the corners (rog segments 5 in FIG. 1, 2, column 3, lines 47+, column 4, lines 1+); each engaged corner of the first and second ones of the tubes being formed from an intersection of a first sidewall and a second sidewall, the first and second side walls being normal to each other (FIG. 1, column 3, lines 47+, column 4, lines 1+); the first sidewall of the first one of the tubes and the first sidewall of the second one of the tubes being in substantial alignment; and the second sidewall of the first one of the tubes and the second sidewall of the second one of the tubes being in substantial alignment (FIG. 1, column 3, lines 47+, column 4, lines 1+).

Loftis does not necessarily teach the specific means of attaching as disclosed in the Specification, which, under 35 USC 112, sixth paragraph, is interpreted to comprise also pins, nor do the directly teach the limitation: "wherein each of the rods is a cylinder having a single cylindrical wall" and "the cylindrical wall of each of the rods contacting at least two recesses associated with at least two of the tubes".

However, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include said limitation in view of Hoover drawn to a strong attachment of heavy load parts, hence analogous art because solved similar problem who teaches: cylinders 1 ("rods"), recesses 2 and 3, pin 4 in FIG. 1 on page 3. It is obvious and very common in mechanical art to use such recesses for precise positioning and convenient connection of rods or cylinders to the convex cylindrical surfaces of corners. An attachment means for attaching respective pairs of a plurality of corners of the tubes to each other in this claim is no more than a description of the commonplace hinge, having a barrel comprised by two knuckles, each knuckle extending from a separate leaf, where the leaf consists of the sidewall of one of the adjacent tubes. This type of structural connection is notoriously well known.

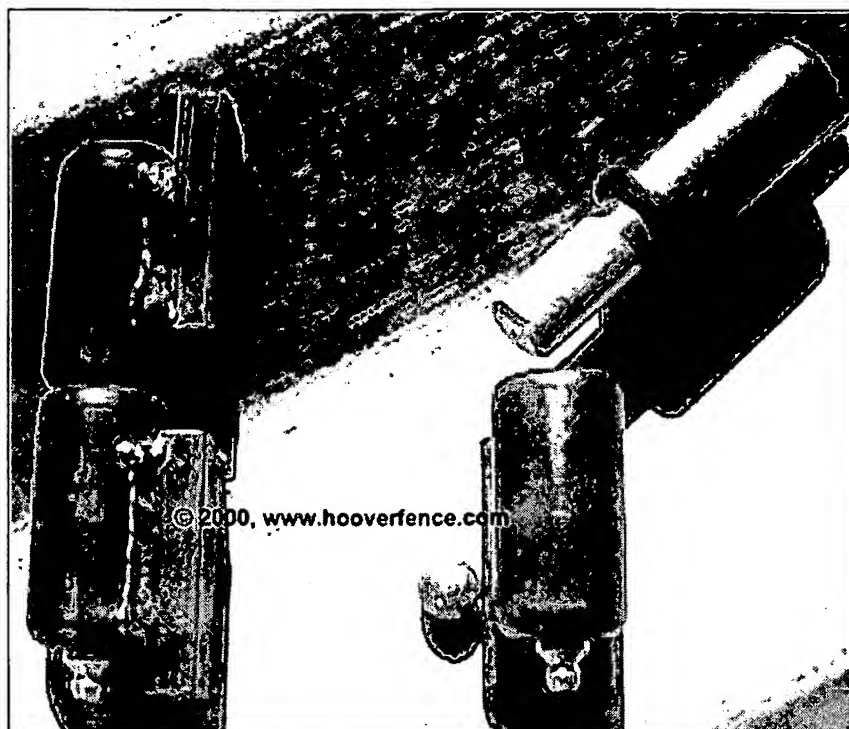
Motivation for said modification derives from Loftis: Typically, the tubes (cylinders) are joined at their corners to common rod segments that are located at various positions along adjacent corners of the tubes (column 1, lines 44+).

Claim is obvious because known work in one field endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations are predictable to one skilled in the art (MPEP 2143).

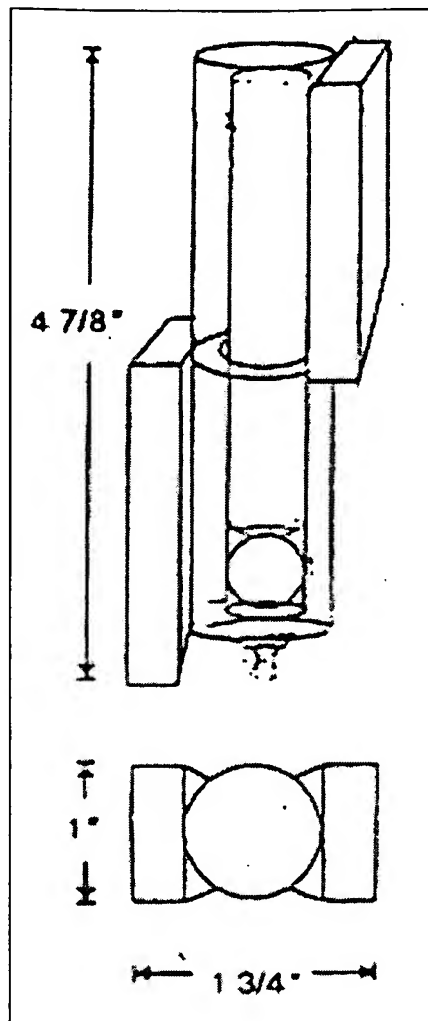
Office Action, pages 9-11.

Applicants respectfully disagree. In particular, the statement that “the attachment means comprising a plurality of recesses (inherently created around the rod segment 5 by welding as shown in FIG. 1,2)” is entirely incorrect. A weld is a weld, not a recess. There is no recess shown by *Loftis*. In addition, such is not inherent in the structure of *Loftis*. In this respect, the welds project outward from the surface or wall and do not recess into it. Thus, such a structure is neither shown nor inherent in the discussion or illustrations of *Loftis*. Rather, assertions otherwise are clearly the subject of improper hindsight reconstruction that represents an unfair and undue extension of the fair teachings of *Loftis*.

Further, the Office Action specifically points out that *Loftis* does not necessarily teach the means for attaching wherein “each of the rods is a cylinder having a single cylindrical wall” and “the cylindrical wall of each of the rods contacting at least two recesses associated with at least two of the tubes.” To this end, the Office Action points to Hoover Fence as apparently showing the cylindrical walls of rods contacting at least two recesses. Applicants reproduce a photo image of the hinge structure described from the web site cited in the Office Action below.



In addition, a hand sketch provided on the same website further illustrates the hinge as follows:



As shown above, there are absolutely no recesses in the flat structures to which the cylindrical portions are welded. Thus, *Hoover Fence* fails to cure deficits in the teachings of *Loftis* in this respect.

Accordingly, Applicants assert that the cited combination of references fails to show or suggest each of the elements of claim 1.

In addition, the Office Action states that:

Motivation for said modification derives from *Loftis*: Typically, the tubes (cylinders) are joined at their corners to common rod segments that

are located at various positions along adjacent corners of the tubes (column 1, lines 44+).

Claim is obvious because known work in one field endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations are predictable to one skilled in the art (MPEP 2143).

Office Action, page 11.

Applicants disagree. First, Applicants assert that given the nonanalogous nature of *Hoover Fence* relative to the art that is the subject of the present claims, it is folly to assert that that known work in the field of fence hinges will prompt variations in the field of the design of containers for the storage and transport of **radioactive** spent nuclear fuel. Further, there are no design incentives or market forces that would lead one to use a fence hinge in the design of containers for the storage and transport of spent nuclear fuel. To this end, the interior structures of such a container are rigidly held, whereas a hinge is designed to be movable to allow a gate to open and close. Further, the use of the rod and recess design as set forth in claim 1 in the context of containers for the storage and transport of spent nuclear fuel are not necessarily predictable to one skilled in the art.

In particular, one skilled in the art would not think to employ the design that is the subject of claim 1 for containers for the storage and transport of spent nuclear fuel. In support of this contention, reference is made to paragraphs 9-12 of the Second Declaration of Charles Pennington submitted herewith. Such evidence is also presented in the Declaration of Charles Pennington submitted in response to the prior Office Action in this case.

Applicants respectfully assert that the statement that "claim is obvious because known work in one field of endeavor may prompt variations of it for use in either the same field or a different field one based on design incentives or other market forces if the variations are predictable to one skilled in the art (MPEP 2143)" does not include an appreciation of how those skilled in the art would actually approach the problem of designing containers for the storage and transport of radioactive spent nuclear fuel. Rather, it is apparent given the nature of the rejections in the present case that such statements are made in isolation without an appreciation of the considerations taken into account by those skilled in the art at the time of invention.

In this regard, the statements in the Office Action appear to be entirely the product of impermissible hindsight using the invention as a blueprint. Applicant acknowledges that it has been held that any proper judgment on obviousness is in a sense necessarily a reconstruction based on hindsight reasoning, but such reasoning should take into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made and does not include knowledge gleaned only from applicant's disclosure. In re McLaughlin, 58 C.C.P.A. 1310, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). It is also the case that evidence presented by the applicant in the form of secondary evidence such as declarations and the like must be considered in the inquiry. Id. at 1315 (Claim 15 was held allowable in view of affidavits presented by Applicants that rebutted any inference of obviousness) (Emphasis Added). In this case, evidence has been provided in the form of affidavits that rebut the assumptions set forth in the Office Action as described above. In view of such evidence, it is



apparent that the rejection of claim 1 can only be rooted in impermissible hindsight reconstruction.

Further, the United States Supreme Court has recently held that in order to establish the obviousness of an invention,

often, it will be necessary for a court to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue. To facilitate review, this analysis should be made explicit. (Emphasis Added)

KSR International v. Teleflex, 127 S.Ct. 1727, 82 U.S.P.Q.2d 1385 (2007). Thus, a proper rejection of claims as obvious under §103 in view of multiple references must articulate a proper line of reasoning for combining references. Although the reasoning and analysis "need not seek out precise teachings directed to the specific subject matter of the challenged claim," as a court can "take account of the inferences and creative steps that a person of ordinary skill in the art would employ," it is still the case that a proper analysis must be provided. Id. at 1741.

Applicants respectfully assert that the analysis required by the United States Supreme Court in support of an obviousness rejection should include more than a mere recitation of the teachings of a reference coupled with a statement copied from the MPEP. This is especially the case given the evidence presented in the case rebutting such statements.

Accordingly, in view of the forgoing, Applicants assert that the rejection of claim 1 is improper and must be withdrawn. In addition, Applicants assert that the rejection of claims 6 and 7 must be withdrawn as depending from claim 1.

**VIII. REJECTION OF CLAIMS 8-10, 13-34, 48-51, and 53-58 AS ALLEGEDLY BEING UNPATENTABLE UNDER 35 U.S.C. § 103(a) OVER THE COMBINATION OF LOFTIS, BOSSHARD, LINDSAY, AND HOOVER FENCE**

Next, in item 15 of the Office Action, claims 8-10, 13-34, 48-51, and 53-58 have been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over *Loftis* in view of *Bosshard*, in view of *Lindsay*, and further in view of *Hoover Fence*. A prima facie case of obviousness is established only when the prior art teaches or suggests all of the elements of the claims. MPEP §2143.03, In re Rijckaert, 9 F.3d 1531, 28 U.S.P.Q2d 1955, 1956 (Fed. Cir. 1993). In addition to the fact that such rejection is improper due to the fact that Lindsay and Hoover Fence are nonanalogous, Applicants additionally assert that the cited combination of references fail to show or suggest each of the elements of the above identified claims. Accordingly, Applicants respectfully request that the rejection of these claims be withdrawn.

Claim 8 as currently pending recites as follows:

8. A container for storing or transporting spent nuclear fuel, the container comprising:
  - a plurality of tubes that receive spent nuclear fuel;
  - a plurality of first rods being mounted at a point where each respective one of the tubes abuts against another one of the tubes, each of said first rods having an opening, wherein each respective one of the first rods is mounted in a recess of both a first one of the tubes and a second one of the tubes, wherein each of the rods comprises at least one outer wall, the at least one outer wall of each of the rods contacting the recesses of both the first and second ones of the tubes;
  - at least one pin;
  - wherein the openings of respective ones of the first rods mounted on the first one of the tubes are substantially aligned with the openings of respective ones of the first rods mounted on the second one of the tubes;
  - the at least one pin extends through the aligned ones of the openings of the first rods, thereby linking respective ones of the tubes together; and
  - wherein each one of the respective ones of the first rods mate with a corresponding recess in the second one of the tubes when the

openings of the respective ones of the first rods mounted in the recesses in the first one of the tubes are substantially aligned with the openings of the respective ones of the first rods mounted on the second one of the tubes.

With respect to claim 8, the Office Action states as follows:

Regarding claim 8 Loftis discloses: a container for storing or transporting spent nuclear fuel (title, abstract, column 1, lines 17+, column 2, lines 38+), the container comprising: a plurality of tubes ("cells") that receive spent nuclear fuel (cells C1-C15 in FIG. 1, 3, column 2, lines 37+, column 3, lines 48+); a plurality of first rods being mounted at a point where each respective one of the tubes abuts against another one of the tubes (rod segments 5 in FIG. 1, 2, column 3, lines 47+, column 4, lines 1+).

Loftis does not necessarily teach directly the limitation "the rods is a cylinder having a single cylindrical wall, the cylindrical wall of each of the rods contacting the recesses of both the first and second ones of the tubes" and "each of said first rods having an opening, wherein each respective one of the first rods is mounted in a recess of both a first one of the tubes and a second one of the tubes, at least one pin; wherein the openings of respective ones of the first rods mounted on the first one of the tubes are substantially aligned with the openings of respective ones of the first rods mounted on the second one of the tubes; the at least one pin extends through the aligned ones of the openings of the first rods, thereby linking respective ones of the tubes together; and wherein each one of the respective ones of the first rods mate with a corresponding recess in the second one of the tubes when the openings of the respective ones of the first rods mounted in the recesses in the first one of the tubes are substantially aligned with the openings of the respective ones of the first rods mounted on the second one of the tubes".

However, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include said limitation in view of admitted prior art Bosshard drawn to rack for storing nuclear fuel elements, hence analogous art who teach to "It has been known lugs in the form of hinges or pivots have been welded to the edges of square tubes in order to provide lateral support between the tubes. The lugs are connected by a pin which is inserted through the lugs." (Column 1, lines 7+). It is obvious and very common in mechanical art to use such recesses for precise positioning and convenient connection of rods or cylinders to the convex cylindrical surfaces of corners as disclosed by Hoover (as shown in FIG. 1 on page 3).

Further, Lindsay discloses an example of using the tubes being substantial alignment and pins inserted into the tubes (first rods) for

connection of different parts of system (abstrace, tubes 42, pins 44 in FIGs. 2A, 2B, 3A, 3B, 3C, 3D, 4A, 4B, page 2, column 2, lines 38+, page 3, column 1, lines 1+, pin 70 in FIGs. 7A, 7B). Example of similar connection between corners of tubs is represented by Hoover.

Motivation: The hollow rod-pin combination recited in the current claims amounts to no more than a description of the commonplace hinge, having a barrel comprised by two knuckles, each knuckle extending from a separate leaf, where the leaf consists of the sidewall of one of the adjacent tubes. This type of structural connection is notoriously well known. Bosshard discloses that it is considered a simple and reliable solution to connect square tubes with lugs in the form of hinges or pivots that are welded to the edges of those tubes and to pass a pin through the lugs to provide lateral support to the tubes (col. 1, lines 7+).

Claim is obvious because known work in one field endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations are predictable to one skilled in the art (MPEP 2143).

Office Action, pages 12-14.

Applicants respectfully disagree. Neither *Loftis*, *Bosshard*, *Lindsay*, or *Hoover Fence* discloses the concept of the rods mounted in recesses of the tubes where the rods contact the recesses of first and second ones of the tubes as set forth in claim 8. To this end, claim 8 has been further amended herein to recite the rods including at least one outer wall that contacts the recesses of first and second ones of the tubes. In addition, the same reasoning applies to claims 18, 28, and 48 to the extent that such language or similar language is included in such claims. In particular, as described above with respect to claim 1, neither *Loftis* nor *Hoover Fence* teach the recesses within which the rods are disposed. Further, neither *Bosshard* nor *Lindsay* show such structures.

In particular, as admitted in the Office Action, it is stated that Bosshard teaches "it has been known lugs in the form of hinges or pivots have been welded to the edges

of square tubes in order to provide lateral support between the tubes. The lugs are connected by a pin which is inserted through the lugs. (Column 1, line 7+)" (Emphasis Added) As such, the Office Action admits that *Bosshard* fails to show or suggest the recesses and the disposition of the rods within the recesses as set forth in claims 8, 18, 28, and 48.

In addition, *Lindsay* fails to show or suggest such an element. Rather, *Lindsay* appears to show how pins may be placed through receptacles to hold a trailer hinge to a beam as depicted. There is absolutely no discussion or depiction by *Lindsay* of recesses disposed in the walls within which rods are disposed as set forth in the present claims.

Applicants note that including the rods within the recesses of the walls of the tubes as described by the present claims results in the spent nuclear fuel being stored in closer proximity, thereby facilitating the storage of greater amounts of spent nuclear fuel within a container of similar size to prior art containers. This allows for the storage of greater amounts of nuclear fuel using existing cask designs. This provides a significant benefit in the field and a significant advantage over prior art containers for the storage of spent nuclear fuel. In addition, Applicants assert that those skilled in the art would not think to modify existing spent fuel basket structures so as to include the recesses and the rods within the recesses as described by claims 8, 18, 28, or 48. To this end, there are specific reasons why one skilled in the art would not be led to do so.

To this end, the Declarations of Charles Pennington presented in this case state the following:

Upon initial scrutiny, one skilled in the art of storage and transportation systems for spent nuclear fuel would not think to use the rod

and recess technology that is the subject of the claims of the '879 patent for connectivity between tubes in a spent nuclear fuel containment system basket, which holds the nuclear spent fuel. This is because, at first glance, the approach appears too simple and presents neither obvious strength of connectivity between tubes, nor sufficient heat transfer paths for very hot spent nuclear fuel. Also at first glance, the design does not appear to provide for adequate mechanical ligaments for accident condition load transmission and distribution through the structure so that both the container and the spent nuclear fuel disposed therein remain geometrically stable through the range of off-normal and hypothetical accident conditions that a system must withstand as required by applicable Federal regulations.

Furthermore, before invention of the rod and recess technology that is the subject of the claims of the '879 patent, one skilled in the art would have been likely to deem such a design as unworkable due to weaknesses in the design. Specifically, given that in some embodiments, the rods are not rigidly or permanently fixed in the opposing recesses, there is potential for relative motion among the tubes. One would be led to assume that "pull-out" forces from accident conditions imposed on the rods would remove them from the recesses, causing unacceptable basket instability. Typically, it has long been accepted that fairly massive structures with extensive welding and very rigid assembly represent the best approach for the basket design in storage and transport systems for spent nuclear fuel. At the time of the invention of the rod and recess technology that is the subject of the claims of the '879 patent, the perceived connection "looseness" represented a glaring weakness. In addition, at the time of the invention of the rod and recess technology, the depth of the recesses appeared to be another potential weakness under compressive loading, owing to the thinning of the wall material at a naturally weak point at the corners of the tubes.

In addition, the reasoning provided by the Office Action to combine the above cited references is inadequate to support a rejection of claims as obvious under §103 for the same reasons set forth above with respect to the prior cited rejection. That is to say that the analysis required by the United States Supreme Court in support of an obviousness rejection should include more than a mere recitation of the teachings of a reference coupled with a statement copied from the MPEP. Once again, Applicants assert that this is especially the case, given the evidence presented in the case rebutting such statements set forth above.

Accordingly, Applicants respectfully request that the rejection of claim 8 as amended in view of the combination of *Loftis*, *Bosshard*, *Lindsay*, and *Hoover* be withdrawn. In addition, Applicants request that the rejection of claims 8, 28, and 48 as amended be withdrawn for reasons similar in scope with that described with respect to claim 1 above to the extent applicable. Also, Applicants request that the rejection of claims 9-10, 13-17, 19-27, 29-34, 49-51, and 53-58 be withdrawn as depending from claims 8, 18, 28, or 48.

#### **IX. RESTRICTION REQUIREMENT**

In addition, it appears that grounds for rejection for claims 59-65 have been articulated on pages 29-31 of the Office Action, even though such claims have been withdrawn from consideration in paragraph 1 of the Office Action. Accordingly, Applicants assert that it appears that the recitation of a rejection of such claims comprises an error. Nonetheless, Applicants note that claim 59 includes subject matter similar in scope with that of claim 8 described above. Thus, in the case that claims 59-65 are not subject to a restriction requirement, Applicants assert that the cited combination of references fails to show or suggest each of the elements of these claims for reasons set forth above. Therefore, Applicants request that the rejection be withdrawn. However, in the event that such claims are subject to a restriction requirement, Applicants respectfully withdraw these claims from consideration and expressly reserves the right to pursue the subject matter of such claims in a divisional application.

**X. COMMERCIAL SUCCESS**

Also, it has long been held that commercial success of products that include structures that are elements of the claims of a patent application is directly relevant in proving the nonobviousness of the claims of a given patent application. Vulcan Engineering Co. Inc. v. Fata Aluminum Inc., 278 F3d 1366, 1373, 61 USPQ 2d 1545 (Fed. Cir. 2002), cert. denied, 537 U.S. 814 (2002). In addition, an Applicant must show that the claimed features were responsible for the commercial success of the article if the evidence of nonobviousness is to be accorded substantial weight. See MPEP §716.03(b); In re Huang, 100 F3d 135, 140, 40 USPQ 2d 1685, 1690 (Fed. Cir. 1996) (inventor's opinion as to the purchaser's reason for buying a product is insufficient to demonstrate a nexus between the sales and the claimed invention.). Further, the commercial success must be shown to be commensurate in scope with the claims. In re Tiffin, 448 F2d 791, 171 USPQ 294 (CCPA 1971); MPEP 716.03(a).

Attached hereto is a Third Declaration by Charles Pennington attesting to commercial success of nuclear storage containment systems that employ containers using a design that includes features of the claims of the present patent application. The commercial success involves the sale of the containers to a major nuclear utility without first receiving certification for the containers from the Nuclear Regulatory Commission. This represents a significant leap of faith on the part of a major utility that would sign a contract for the purchase of such containers even though the Nuclear Regulatory Commission has not yet certified a design. The reason for this leap of faith is because of the greater amount of spent nuclear fuel that can be stored within the containers due to the designs set forth in the claims as compared to prior art containers.



To this end, the nexus between the claimed technology that gives rise to the advantages of greater capacity for the storage of spent nuclear fuel is set forth in item 8 and in the remainder of the Declaration. Accordingly, the third Declaration by Charles Pennington must be afforded substantial weight in the determination of nonobviousness of the claims of the present patent application. Thus, in view of this additional evidence, Applicants once again respectfully assert that the rejection of the pending claims be withdrawn.

Finally, claims 69-71 have been added herein to claim additional embodiments. Favorable action with respect to claims 69-71 is requested.

### **CONCLUSION**

It is requested that all outstanding objections and rejections be withdrawn and that this application and all presently pending claims be allowed to issue. If the Examiner has any questions or comments regarding this Response, the Examiner is encouraged to telephone the undersigned counsel of Applicants.

Respectfully submitted,

/Michael J. D'Aurelio/

---

Michael J. D'Aurelio  
Registration Number: 40,977

**Thomas, Kayden, Horstemeyer & Risley, L.L.P.**  
600 Galleria Parkway, S.E.  
Suite 1500  
Atlanta, Georgia 30339-5948  
Phone: (770) 933-9500  
Fax: (770) 951-0933